

PERFORMANCE SPECIFICATION SHEET

FILTERS, RADIO FREQUENCY INTERFERENCE,
 HERMETICALLY SEALED, STYLE FL16

Part numbers M15733/38-0001, -0002, -0004, -0005, are inactive for new design as of 6 October 1980. For new design use M15733/38-0006 for M15733/38-0001; use M28861/01-001TB of MIL-PRF-28861/1 for M15733/38-0002, -0004, and -0005.

This specification sheet is approved for use by all Departments and Agencies of the Department of Defense.

The complete requirements for acquiring the filters described herein shall consist of this specification sheet and the latest issue of MIL-PRF-15733.

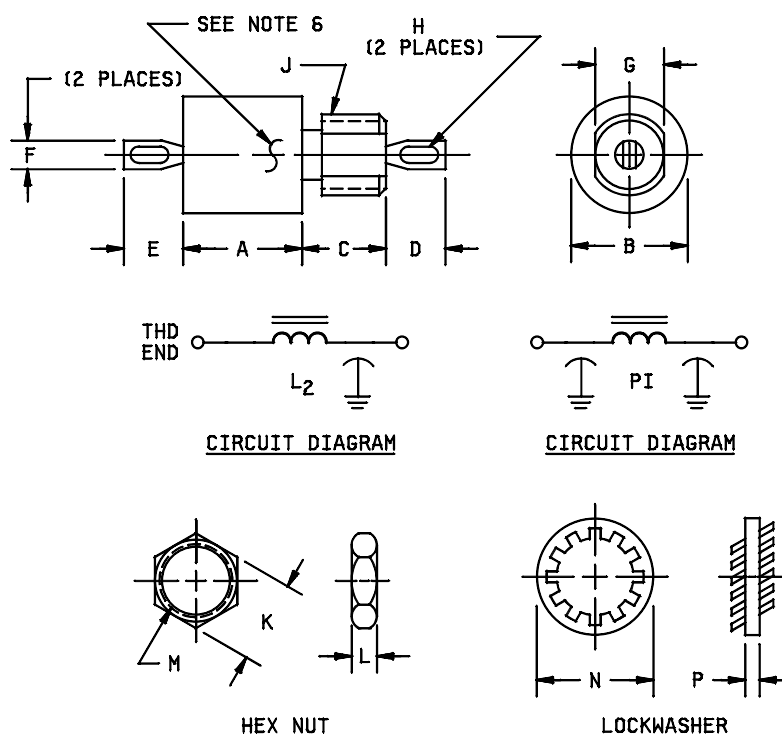


FIGURE 1. Filter and hardware dimensions and circuit diagrams.

MIL-PRF-15733/38K

Filter dimensions.

Dash number	A		B		C		D		E	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
0001	.290 (7.37)	.310 (7.87)	---	.42 (10.7)	.302 (7.67)	.322 (8.18)	.100 (2.54)	.190 (4.83)	.100 (2.54)	.190 (4.83)
0002	.160 (4.06)	.291 (7.39)	---	.415 (10.54)	.180 (4.57)	.200 (5.08)	.100 (2.54)	.190 (4.83)	.100 (2.54)	.190 (4.83)
0003	.530 (13.46)	.550 (13.97)	---	.385 (9.78)	.177 (4.50)	.197 (5.00)	.100 (2.54)	.190 (4.83)	.100 (2.54)	.190 (4.83)
0004	.160 (4.06)	.180 (4.57)	---	.385 (9.78)	.177 (4.50)	.197 (5.00)	.100 (2.54)	.190 (4.83)	.100 (2.54)	.190 (4.83)
0005	.160 (4.06)	.180 (4.57)	---	.385 (9.78)	.177 (4.50)	.197 (5.00)	.100 (2.54)	.190 (4.83)	.100 (2.54)	.190 (4.83)
0006	.160 (4.06)	.291 (7.39)	---	.415 (10.54)	.302 (7.67)	.322 (8.18)	.100 (2.54)	.190 (4.83)	.100 (2.54)	.190 (4.83)
0007	.210 (5.33)	.230 (5.84)	---	.385 (9.78)	.302 (7.67)	.322 (8.18)	.100 (2.54)	.190 (4.83)	.100 (2.54)	.190 (4.83)
0008	.160 (4.06)	.180 (4.57)	---	.385 (9.78)	.177 (4.50)	.197 (5.00)	.100 (2.54)	.190 (4.83)	.100 (2.54)	.190 (4.83)
0009	.290 (7.37)	.310 (7.87)	---	.385 (9.78)	.177 (4.50)	.197 (5.00)	.100 (2.54)	.190 (4.83)	.100 (2.54)	.190 (4.83)
0010	.290 (7.37)	.310 (7.87)	---	.385 (9.78)	.302 (7.67)	.322 (8.18)	.100 (2.54)	.190 (4.83)	.100 (2.54)	.190 (4.83)

FIGURE 1. Filter and hardware dimensions and circuit diagrams - Continued.

Filter dimensions - Continued.

Dash number	F	G		H ^{1/}		J
	+ .010 - .015	Min	Max	±.010	±.010	Mounting thread
0001	.115 (2.92)	.190 (4.83)	.210 (5.33)	.060 (1.52)	.080 (2.03)	.250-28 UNF-2A
0002	.115 (2.92)	.190 (4.83)	.210 (5.33)	.060 (1.52)	.080 (2.03)	.250-28 UNF-2A
0003	.115 (2.92)	.190 (4.83)	.210 (5.33)	.060 (1.52)	.080 (2.03)	.250-28 UNF-2A
0004	.115 (2.92)	.190 (4.83)	.210 (5.33)	.060 (1.52)	.080 (2.03)	.250-28 UNF-2A
0005	.115 (2.92)	.190 (4.83)	.210 (5.33)	.060 (1.52)	.080 (2.03)	.250-28 UNF-2A
0006	.115 (2.92)	.190 (4.83)	.210 (5.33)	.060 (1.52)	.080 (2.03)	.250-28 UNF-2A
0007	.115 (2.92)	.190 (4.83)	.210 (5.33)	.060 (1.52)	.080 (2.03)	.250-28 UNF-2A
0008	.115 (2.92)	.190 (4.83)	.210 (5.33)	.060 (1.52)	.080 (2.03)	.250-28 UNF-2A
0009	.115 (2.92)	.190 (4.83)	.210 (5.33)	.060 (1.52)	.080 (2.03)	.250-28 UNF-2A
0010	.115 (2.92)	.190 (4.83)	.210 (5.33)	.060 (1.52)	.080 (2.03)	.250-28 UNF-2A

^{1/} Optional slot may be supplied .050 (1.27) ±.010 (.25) inches by .070 (1.78) ±.010 (.25) inches.

FIGURE 1. Filter and hardware dimensions and circuit diagrams - Continued.

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Hardware dimensions

Dash number	K		L		M	N		P	
	Min	Max	Min	Max	Thread	Min	Max	Min	Max
0001	.302 (7.67)	.322 (8.18)	.085 (2.16)	.095 (2.41)	.250-28 UNF-2B	.395 (10.03)	.408 (10.36)	.010 (.25)	.030 (.76)
0002	.307 (7.80)	.317 (8.05)	.088 (2.24)	.098 (2.49)	.250-28 UNF-2B	.395 (10.03)	.405 (10.29)	.019 (.48)	.025 (.64)
0003	.307 (7.80)	.317 (8.05)	.088 (2.24)	.098 (2.49)	.250-28 UNF-2B	.395 (10.03)	.405 (10.29)	.019 (.48)	.025 (.64)
0004	.307 (7.80)	.317 (8.05)	.088 (2.24)	.098 (2.49)	.250-28 UNF-2B	.395 (10.03)	.405 (10.29)	.019 (.48)	.025 (.64)
0005	.307 (7.80)	.317 (8.05)	.088 (2.24)	.098 (2.49)	.250-28 UNF-2B	.395 (10.03)	.405 (10.29)	.019 (.48)	.025 (.64)
0006	.307 (7.80)	.317 (8.05)	.088 (2.24)	.098 (2.49)	.250-28 UNF-2B	.395 (10.03)	.405 (10.29)	.019 (.48)	.025 (.64)
0007	.307 (7.80)	.317 (8.05)	.088 (2.24)	.098 (2.49)	.250-28 UNF-2B	.395 (10.03)	.405 (10.29)	.019 (.48)	.025 (.64)
0008	.307 (7.80)	.317 (8.05)	.088 (2.24)	.098 (2.49)	.250-28 UNF-2B	.395 (10.03)	.405 (10.29)	.019 (.48)	.025 (.64)
0009	.302 (7.67)	.322 (8.18)	.088 (2.24)	.098 (2.49)	.250-28 UNF-2B	.395 (10.03)	.405 (10.29)	.019 (.48)	.025 (.64)
0010	.302 (7.67)	.322 (8.18)	.088 (2.24)	.098 (2.49)	.250-28 UNF-2B	.395 (10.03)	.405 (10.29)	.019 (.48)	.025 (.64)

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Circuit diagram is for information only.
4. All filters shall be supplied with mounting hardware.
5. Terminal thickness shall be .021 (0.53 mm)/.011 (0.28 mm).
6. Terminal identification. The case shall be marked at the threaded end of the filter, with the symbol "L" for dash numbers 0001, 0002, 0004, 0005, 0006, 0008, 0009, and 0010.

FIGURE 1. Filter and hardware dimensions and circuit diagrams - Continued.

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REQUIREMENTS:

Dimensions and configuration: See figure 1.

Weight: 5 grams maximum.

Case: Metal.

Case and hardware finish: In accordance with MIL-PRF-15733. Pure tin finish is prohibited.

Seal: Glass-to-metal.

Terminals: Solderable (see figure 1).

Operating temperature range:

Dash 0001 through 0006, 0008, 0009, and 0010: -55°C to +125°C.

Dash 0007: -55°C to +85°C

Rated voltage: See table I.

Rated current: See table I.

Seal: In accordance with MIL-PRF-15733.

Capacitance to ground: Not specified.

Temperature rise: +25°C maximum.

Insulation resistance: In accordance with MIL-PRF-15733 and the following:

Test temperature: +25°C.

Test potential: Rated dc voltage or 100 volts dc whichever is less.

Insulation resistance shall be not less than:

<u>Dash numbers</u>	<u>Megohms</u>
0001	500
0002 through 0007, 0009, and 0010	100
0008	1,000

Voltage drop: See table I.

Insertion loss: In accordance with MIL-PRF-15733 and the following:

At +25°C: Shall be as specified in table I.

At -55°C and at the maximum operating temperature: Shall be as specified in table I except as follows:

Up to 10 MHz: A degradation of 4 dB from the value specified in table I shall be allowed.

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Terminal strength: In accordance with MIL-PRF-15733 and Method 211, MIL-STD-202; test condition A (pull):

Applied force: 5 pounds.

Salt atmosphere (corrosion): In accordance with MIL-PRF-15733 and method 101, MIL-STD-202; test condition A.

Shock (specified pulse): In accordance with MIL-PRF-15733 and method 213, MIL-STD-202; test condition I (100g).

Vibration, high frequency: In accordance with MIL-PRF-15733 and method 204, MIL-STD-202; test condition D (20g).

Life: In accordance with MIL-PRF-15733 and method 108 of MIL-STD-202.

Qualification inspection: Test condition D (1,000 hours).

Group C inspection:

<u>Dash numbers</u>	<u>Test condition</u>
0001, 0002, 0004 through 0010	B (250 hours)
0003	D (1,000 hours)

Part or Identifying Number (PIN): M15733/38- (dash number from table I).

Marking: Marking shall be as follows:

For dash numbers 0001, 0002, and 0004 through 0010, the filter shall be marked with the following minimum information:

- a. Military PIN.
- b. Source code.
- c. Date code.
- d. Terminal identification.

Full marking in accordance with MIL-PRF-15733 shall be marked on the unit package. For dash number 0003, the filter shall be marked with full marking in accordance with MIL-PRF-15733.

Extension of qualification:

Initial qualification to MIL-PRF-15733/38 may be granted based on qualification to MIL-PRF-28861/1 or MIL-PRF-15733/49 as indicated in table II. Extension of qualification from MIL-PRF-28861/1 or MIL-PRF-15733/49 to MIL-PRF-15733/38 is permissible under the following provisions:

- a. The MIL-PRF-15733/38 part uses the same design and dielectric characteristics as the part upon which extension of qualification is based.
- b. The MIL-PRF-28861/1 or MIL-PRF-15733/49 qualification data verifies that the physical and electrical characteristics of the MIL-PRF-15733/38 parts are satisfied.

MIL-PRF-15733/38K

TABLE I. Electrical characteristics.

Dash number	Circuit	Max current (amps)	Voltage		Voltage drop (volts dc max)	Minimum full load insertion loss (dB) in accordance with MIL-STD-220 at +25°C 1/							
			DC volts	AC 2/		30 KHz	150 KHz	300 KHz	1 MHz	10 MHz	100 MHz	1 GHz	10 GHz
0001	L2	10	50	-	.040	-	-	-	44	60	55	-	-
0002	L2	15	50	-	.12	15	28	33	44	60	-	70	70
0003	Pi	3	150	-	.15	-	7	24	54	80	80	80	80
0004	L2	10	50	-	.08	15	28	33	44	60	-	70	-
0005	L2	10	50 3/	-	.08	15	28	33	44	60	-	70	-
0006	L2	15	50	-	.12	15	28	33	44	60	-	70	70
0007	Pi	15	50	-	.09	70 dB from 420 MHz to 1.0 GHz, inclusive							
0008	L2	15	200	125	.12	-	-	-	6	25	-	60	-
0009	L2	15	250	125	.09	4	15	21	31	50	-	70	80
0010	L2	15	250	125	.09	4	15	21	31	50	-	70	80

1/ Full-load insertion loss measurements shall be performed over the frequency range of 100 kHz to 20 MHz inclusive. Measurements below or above this frequency range shall be performed at no-load.

2/ From dc to 400 Hz.

3/ Voltage rating at +125°C: (Note - derated from 80 V dc at +85°C).

TABLE II. Extension of qualification.

Qualification to MIL-PRF-28861/1	Will qualify MIL-PRF-15733/38		Qualification to MIL-PRF-15733/49	Will qualify MIL-PRF-15733/38
-001	-0002		-0006	-0004
-001	-0004		-0006	-0005
-001	-0005			
-011	-0006			
-009	-0008			

Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extensiveness of the changes.

Custodians:

Army - CR
Navy - EC
Air Force – 11
DLA - CC

Preparing activity:
DLA - CC

(Project 5915-0416)

Review activities:

Army - AR, AT, AV
Navy - AS, MC, OS, SH
Air Force - 19, 99